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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,196	12/21/2001	Michael Childs	1528.010US1	4927
21186	7590	03/23/2004	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402			NGUYEN, THU V	
		ART UNIT		PAPER NUMBER
		3661		

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/032,196	CHILDS ET AL. <i>MW</i>	
<b>Period for Reply</b>	<b>Examiner</b>	<b>Art Unit</b>	
	Thu Nguyen	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 December 2003.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-7,9-17,19-26 and 29-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 9-15 and 38 is/are allowed.
- 6) Claim(s) 1-7,16,17,20-24,26,29-37,39 and 40 is/are rejected.
- 7) Claim(s) 19 and 25 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

The amendment filed on December 15, 2003 has been entered. By this amendment, claims 8, 18, 27-28 have been canceled, claims 38-40 have been added and claims 1-7, 9-17, 19-26, 29-40 are now pending in the application.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 16-17, 20-24, 26, 29-30, 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al (US 5,452,212) in view of O'Shea (US 6,199,013).

As per claim 1, 5-6, Yokoyama teaches an electronic navigation aid device comprising: a processor 20 (fig.1); a memory 10 (fig.1) connected to the processor to provide route guidance that account for insignificant route (col.8, lines 7-20). Yokoyama does not explicitly teach that the route such as entry/exit, interchange are route segments, and does not teach modifying a maneuver associated with an insignificant road segment. However, O'Shea teaches expressing the pieces of route in segments (col.4, lines 9-28), and modifying a maneuver (nullifying the navigation maneuver, or giving maneuver instruction specific to the type of the segment or the

connection of segments) associated with an insignificant route segment (col.6, lines 16-24; col.7, lines 20-41). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to express the route as segments connected by nodes, and to include modifying a maneuver associated with an insignificant route segment as taught by O'Shea in the navigation device of Yokoyama in order to provide appropriate maneuver which minimizes confusion to the user.

As per claim 2-4, O'Shea teaches that implementing navigation program into a portable navigation device would have been obvious (col.23, lines 30-39). Moreover, including a remote server that includes a processor for calculating navigation instruction, and transmitting the results to the navigation device in a wireless communication channel to a PDA, and the cellular navigation device that retrieves the navigation data stream from the server via wireless communication channel would have been well known (refer to section "response to arguments" and "cited prior arts" below). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate navigation feature of Yakoyama to a PDA and to provide a communication channel to a remote server to the PDA in order to obtain navigation instruction from a remote server to reduce workload and to increase speed of data processing to the PDA.

As per claim 7, O'Shea teaches nullifying a maneuver associated with an insignificant route segment (col.6, lines 19-24).

As per claim 16, refer to claims 1 above. Moreover, including a remote server that communicates navigation data to a navigation system via a communication channel would have been well known (refer to section “response to arguments” and “cited prior arts” below for support of the assertion). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to establish a communication channel between the navigation system of Yokoyama to a remote server in order to obtain navigation instruction from a remote server to reduce workload and to increase speed of data processing to the navigation system of Yokoyama.

As per claim 17, refer to claim 7 above.

As per claim 20-24, including a remote server that includes a processor for calculating navigation instruction, and transmitting the results to the navigation device in a wireless communication channel to a PDA, and the cellular navigation device that retrieves the navigation data stream from the server via wireless communication channel would have been well known (refer to sections “response to arguments” and “Cited Prior Arts” below for support of the assertion). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate navigation feature of Yakoyama to a PDA and to provide a communication channel to a remote server to the PDA in order to obtain navigation instruction from a remote server to reduce workload and to increase speed of data processing to the PDA.

As per claim 26, 29, 34-35, refer to claims 16, 7 above. O'Shea does not explicitly teach the exact steps of identifying the sequence of route segments, determining whether the segment is significant or insignificant, providing for a maneuver associated with the significant/ insignificant route segment including nullifying or modifying other maneuvers, and performing modification or nullification accordingly. However, since O'Shea teaches recognizing the type or route segments connected to a node and providing maneuver according to such the specific type of the segments connected to the node or nullifying the maneuver (col.6, lines 19-27, lines 40-64), O'Shea obviously include teaching recognizing significant or insignificant feature of the segment (when the next segment is basically straight and does not require significant turn), further, since O'Shea teaches providing specific maneuver to a specific type of segments' connection instead of providing traditional maneuver instruction which is indiscriminating of the type of segments (col.6, lines 16-67; col.7, lines 20-67), O'Shea obviously include the steps of identifying the significant/insignificant road segment and providing appropriate maneuver including nullifying the road segment according to the type (the significant/insignificant) of the road segment as claimed.

As per claim 30, since O'Shea teaches the capability of recognizing the name of a segment (col.11, line 48), and omitting the checking name for certain criteria (col.16, lines 40-47), O'Shea obviously include the capability of determining whether a route segment has a name.

3. Claims 31-33, 36-37, 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoyama et al (US 5,452,212) in view of O'Shea (US 6,199,013) and further in view of Hasegawa et al (US 6,510,379).

As per claim 31-33, O'Shea teaches determining whether a segment has a name, and determining whether the segment is qualify for nullification or modification (col.6, lines 19-64; col.7, lines 20-67), and Hasegawa teaches determining significant characteristic of a road segment by determining the length of the segment (col.7, lines 15-31; col.8, lines 66-67; col.9, lines 1-4, lines 10-12). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to extent the criteria for determining significant characteristic of a road segment of the combined Yokoyama and O'Shea to the length of a segment as taught by Hasegawa in order to eliminate providing maneuver instruction on a short road segment. Further, predefining the exact length of the segment for determining the type to the segment as desired required only routine skill in the art.

As per claim 36-37, refer to claims 30-35 above.

As per claim 39-40, refer to claims 16, 26, 31-34, 36-37 above.

***Allowable Subject Matter***

4. Claims 9-15, and 38 are allowed.

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5. Claims 19 and 25 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Remark: claim 25 include all limitations set forth in claim 19. If claim 25 is included in the independent claim 16, claim 19 will be rejected under 112 4<sup>th</sup> paragraph because claim 19 fails to further limit the claim it depends on.

6. The following is a statement of reasons for the indication of allowable subject matter:

Prior art of record does not disclose a PDA set forth in claims 9, 38 and claim 19 or 25 in combination with claim 16. Specifically, prior arts of record does not disclose identifying a sequence of route segments and a sequence of maneuvers associated with the route segments, some maneuver of the sequence of maneuvers is either nullified or modified in accordant with the insignificant status of route segments. Although O'Shea teaches providing specific maneuvers, which are different from the traditional maneuver, O'Shea does not teach identifying a sequence of maneuvers associated with the identified route segments, then determining if a maneuver in the identified maneuvers should be nullified or modified.

#### *Response to Arguments*

7. Applicant's arguments filed December 15, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument on page 12, first two paragraphs, O'Shea implies modification of a maneuver, because in col.6, lines 19-67; col.11, lines 40-67, O'Shea teaches at least nullifying a maneuver (col.6, lines 23-24), and teaches providing a specific maneuver

(col.11, line 40) when the segments is of specific type or has specific connection with the adjacent segments. From the cited lines above, it appears that, conventionally, the navigation system provide route guidance at every segments. O'Shea at least teaches nullifying a guidance at a specific segment, and providing specific route guidance depending on the connection and characteristic of road segments, the specific suggested in col.11, lines 39-67; col.12-col.17 teaches the guidance that is modified (different) from the conventional route guidance in that the conventional route guidance does not consider the type of the road segment of considers if the road segments have the same name or not. In contrast, O'Shea teaches customizing (modifying) the route guidance based on the specific connection and the type of the road.

In response to applicant's argument on page 13, second paragraph, Shiau (US 2002/0091527) teaches cellular technology (para 0031) and Levanon et al (US 2002/0120753) (cited in the "Cited Prior Arts" section below) teaches well known PDA communicating with servers for accessing information from the server through wireless communication channel with data packet (data packet are very well known to be data stream) (para 0019-0020; 0022).

In response to applicant's argument on page 13, last paragraph; page 14, lines 1-8, since O'Shea teaches identifying the names of segment (col.11, lines 57-58), and O'Shea teaches several types of maneuver that does not include considering the names of a route segments (col.16, lines 13-19), O'Shea is obviously able to recognize if the road segment has a name or not. Further, O'Shea obviously consider the successive segment (col.11, lines 49-58) to determine a specific type of guidance (which must be different than the traditional route guidance).

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In response to applicant's argument on page 14, last three paragraphs; page 15, Hasegawa teaches deleting a short line segment as pointed out by the applicant. The teaching means not to provide navigation on such the short line segments. O'Shea teaches considering the type of route segments to modify or nullifying some instruction maneuver and further teaches that type of route segments can further be defined (col.22, lines 28-30), by adding the short line segments to the route type recognized by the system of O'Shea, the navigation method of O'Shea will be more suited to the user.

***Cited Prior Arts***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Shiau (US 2002/0091527) teaches cellular phone technology (para 0031).
- b. Levanon et al (US 2002/0120753) teaches PDA communicating with servers via wireless communication channel utilizing packet data stream (para 0019-0020, 0022).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

**Any response to this final action should be mailed to:**

**Box AF**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 305-7687, (for formal communications; please mark "EXPEDITED PROCEDURE")

**Or:**

(703) 305-7687 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park V, 2451 Crystal Drive, Arlington, VA., Seventh Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Nguyen whose telephone number is (703) 306-9130. The examiner can normally be reached on Monday-Thursday from 8:00 am to 6:00 pm ET.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone number for this Group is (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

  
**THU V. NGUYEN  
PRIMARY EXAMINER**

March 11, 2003